Unit 1: Pre-and Post-assessment for Order of Operations and Whole Numbers

Dear 5th Grade Student,

Please complete the following problems to the best of your ability. You may or may not know the solutions. Just try your best. Please show all your work because we want to know how you think about mathematics. Calculators may be used. Thank you. ☺

1) $8 + 4 = \square + 3$

2) $5 + 3 \times 4 = \square$

3) Add the correct operations to make this a true statement

24 3 2 = 10

4) Evaluate the following numerical expressions.

a. 2 (5 + (3) (2) + 4)
b. 2 ((5+3) (2+4))
c. 2 (5+3 (2+4))

Can the parentheses in any of these expressions be removed without changing the value the expression?

5) Write an expression that records the calculations described below, but do not evaluate.

Add 2 and 4 and multiply the sum by 3. Next, add 5 to that product and then double the result.

6) Leo and Silvia are looking at the following problem:

How does the product of 60×225 compare to the product of 30×225?
Silvia says she can compare these products without multiplying the numbers out. Explain how she might do this. Draw pictures to illustrate your explanation.

7) We know 25 x 28 is larger than 24 x 28. How much larger is it. Please explain your thinking.

8) Using an array model, draw and explain the structure of an algorithm for 23 x 18.

9) Write a word problem to match 400 ÷ 29. Solve the problem and explain the results.